

R E M A R K S

This is in response to the Office Action that was mailed on January 15, 2003. Claims 1-4 are amended, without the introduction of new matter, in order to more idiomatically describe features and benefits of the present invention. Minor formal amendments are made to the specification. No new matter is introduced by this Amendment. Claims 1-4, as amended, are in the application.

The Examiner is respectfully requested to acknowledge the Information Disclosure Statement that was filed herein on March 29, 2000.

Applicants have reviewed the drawings and are not aware of any errors therein.

The Abstract of the Disclosure has been corrected as required by the Examiner.

The expression " Φ 100 X H50mm" refers to an inflator having a feature of a cylindrical disk shape with an outer diameter of the cylindrical disk of 100 mm and a length (or height) of the disk of 50 mm.

Page 8 of the specification has been amended as kindly suggested by the Examiner.

Claim 1 has been amended, as kindly suggested by the Examiner, to obviate objections set forth on page 3 of the Office Action.

Claims 1-4 were rejected under the second paragraph of 35 U.S.C. §112 as failing to define the invention properly. This ground of rejection is obviated by the present amendments to the claims.

THE INVENTION. This invention relates to the disposal and recycling of automobile air bag components. When explosive-chemical-containing inflator cases are processed in conventional waster incinerators, explosion of the chemical often drives the inflator casing or fragments of the inflator casing into the refractory walls of the furnace, damaging the furnace. Also, in order to avoid the possibility of explosions occurring while the furnace is being charged with additional inflators after a first batch of inflators has been charged into the furnace for processing, one waits for a long time before charging second and subsequent batches, thereby slowing down the overall disposal and recycling process.

The present invention solves these problems, first, by configuring the interior of the furnace with metal partition walls to protect the refractory surface of the furnace, and second, by monitoring the inflator explosions within the furnace so that additional inflators can be processed at the earliest possible time after all of the inflators inside of the furnace have exploded.

Claims 1 and 2 were rejected under 35 U.S.C. §102(b) as being anticipated by US 5,294,244 (Allerton). The concurrent amendment of claim 1 differentiates the invention of claims 1 and 2 herein from the disclosure of Allerton.

Claims 1-3 were rejected under 35 U.S.C. §103(a) as being unpatentable over (obvious from) EP 0 677 336 (Nakasato) in view of Allerton. The Nakasato

inflators are fixed in some manner in the furnace (page 3, lines 45-48). In contrast to the prior art, the present invention does not fix the inflators in the furnace, and the present invention avoids damage to the inner surface of the processing furnace.

Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over (obvious from) Nakasato in view of US 3,793,101 (Mullarkey). Neither Nakasato nor Mullarkey teach the metal partition that is now expressly recited in claim 4.

Conclusion

If the Examiner has any questions concerning this application, she is requested to contact Richard Gallagher, Reg. No. 28,781, at (703) 205-8008.

Attached hereto is a marked up version showing the changes made to the application by this Amendment.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants hereby petition for an extension of three (3) months to July 15, 2003, in which to file a reply to the Office Action. The required fee of \$930.00 is enclosed herewith.

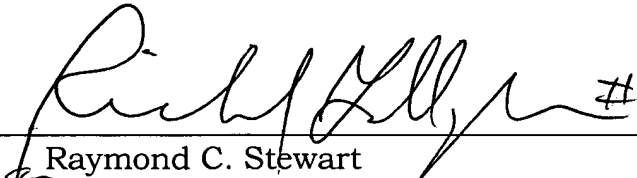
If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit

Serial No. 09/509,571
Docket No. 0425-0763P

Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By  #28,781
Raymond C. Stewart
Reg. No. 21,066

RCS/RG

P. O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

Enclosures:

Marked up copy showing amendments;
Abstract of the Disclosure.

Marked up copy showing amendments:

IN THE SPECIFICATION:

The second full paragraph on page 8 has been amended as follows:

Metal partition walls 8a, 8b, and 8c are provided between the inner surface of the ~~furnace wall 4a of the processing furnace 2 and the inflator 1~~ charged in the processing furnace 2 [and the furnace wall 4a of the processing furnace 2]. Since the metal partition walls 8a, 8b, and 8c are required to have heat resistance and heat strength, a heat-resisting steel such as SUS310S is usually used.

IN THE CLAIMS:

The claims have been amended as follows:

1. (amended) An inflator processing apparatus ~~comprising a processing furnace for processing the inflator, said apparatus being configured [adapted] to process a gas generating chemical-containing inflator comprising a metal case for an automobile air bag [of an automobile] by heating the inflator to a temperature not lower than an [operating] explosion temperature of the chemical and [recover a] subsequently recovering the metal case of the inflator [therefor], wherein a metal partition wall is provided, between the inflator and an inner surface of a wall of [a] the processing furnace for processing the inflator, [and the inflator] so as to cover the inner surface of the wall of the processing furnace [wall] and to prevent the inflator, when actuated by heating, from striking and damaging the inner surface of the wall of the processing furnace.~~

2. (amended) The inflator processing apparatus as claimed in Claim 1, wherein an incinerator provided with a burner and an air supplier for dilution or/and an exhaust gas circulator is/are contiguous to and functionally connected with the processing furnace.

3. (amended) The inflator processing apparatus as claimed in Claim 1 or 2, [wherein] further comprising a module for charging the apparatus with inflators, in which module a [the] timing of charge of the inflator is judged by comparing [the] a total number of charged inflators located in the apparatus with [the] an observed number of peak points of furnace pressure due to explosion [during an operation] of the chemical in the charged inflators located in the apparatus.

4. (amended) A method [of judging] for determining the timing of charge of inflators into an inflator processing apparatus [adapted] configured to process a gas generating chemical-containing inflator for an automobile air bag [of an automobile] by heating the inflator to a temperature not lower than an [operating] explosion temperature of the chemical [, wherein the timing of charge of the inflators is judged by] and subsequently recovering the metal case of the inflator, wherein a metal partition wall is provided, between the inflator and the inner surface of a wall of the processing furnace for processing the inflator, so as to cover the inner surface of the wall of the processing furnace and to prevent the inflator actuated by heating from striking and damaging the inner surface of the wall of the processing furnace, which method comprises the step of comparing [the] a total number of charged inflators located in the apparatus with [the] an observed number of peak points of furnace pressure [during an operation] due to explosion of the chemical in the charged inflators located in the apparatus.